Remarks

Claims 1-10 are pending in this application. Claim 1-10 have been rejected. Claims 9 and 10 stand rejected under 35 U.S.C. § 112, second paragraph. Claims 1, 2, and 5 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Ma (U.S. Patent No. 5,953,338). Claims 3-4 and 6-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ma further in view of Kekic (U.S. Patent No. 5,999,179).

Applicants' invention relates to providing, to a user, a user interface to a network management system for configuring a network connection between a provider access point and a user access point over a network including a permanent virtual circuit between a switch and the user access point. Applicants' invention provides a user interface to the user at the user access point that interfaces the user with the network management system. Applicants' invention further allows the user, from the user access point, to interface with the network management system and select a bandwidth that is, in turn, provisioned as the connection bandwidth between the switch and the user access point.

Regarding the rejection of claims 9 and 10 under 35 U.S.C. § 112, second paragraph, applicants have amended claims 9 and 10 to make these claims dependent upon claim 7 to more particularly point out the invention.

Regarding the rejection of claims 1, 2, 5 under 35 U.S.C. § 102(e) as being anticipated by Ma, applicants have amended claim 1 to more particularly point out the invention. Claim 1 recites a computer readable storage medium having instructions stored thereon. The instructions are executable by a computer to provide, to a user, a user interface to a network management system for configuring a network connection between a provider access point and a user access point over a network. The network includes a permanent virtual circuit between a switch and the user access point. The medium further comprises instructions for providing a user interface to the user at the user access point that interfaces the user with the network management system and that directs the user to select a connection bandwidth for the permanent virtual circuit between the switch and the user access point. The medium

further comprises instructions for receiving at the network management system, through the user interface, a message indicative of a selected bandwidth from the user. The medium further comprises instructions for remotely provisioning the switch with the network management system in response to receiving the message to throttle the network connection at the switch such that the connection bandwidth between the switch and the user access point is limited by the user's selected bandwidth. This allows the user, from the user access point, to interface with the network management system and select a bandwidth that is, in turn, provisioned as the connection bandwidth between the switch and the user access point.

Ma describes dynamic control processes and systems for asynchronous transfer mode networks. Ma does describe the management of virtual private network connections. Specifically, Ma recognizes that existing systems do not adequately address the concern of whether each client consumes an appropriate, necessary portion of shared resources and that according on Ma, there does not presently exist any way to dynamically manage stored resources at a continuous, ongoing, real-time basis. Col. 2, ll. 61-65. In addressing these stated problems, Ma proposes a way to dynamically manage stored resources. Specifically, Ma does describe creating and destroying virtual channels as needed to manage bandwidth. The Examiner directs applicants' attention to col. 4, ll. 26-29. In this portion, Ma describes throttling physical interfaces to shape bandwidth consumed by the overall ATM networks. Ma further describes bandwidth management at col. 13, ll. 17-56. Ma specifically describes creating and destroying virtual channels within virtual paths to manage bandwidth.

Claim 1 does recite configuring a network connection including a permanent virtual circuit between a switch and the user access point. However, claim 1 recites a specific combination of features that is not suggested by Ma. Although Ma describes general bandwidth management through creation and destruction of virtual channels, claim 1 specifically recites providing a user interface to the user at the user access point that interfaces the user with the network management system, in combination with other limitations, to allow the user, from the user access point, to interface with the network management system and select a bandwidth that is, in turn, provisioned as the connection bandwidth between the switch and the user access point. Ma does not suggest the specific combination of features including

the user interfacing with the network management system from the user access point and selecting a bandwidth that is in turn provisioned as the connection bandwidth between the switch and the user access point. Ma only describes creating and destroying virtual channels and does not describe or suggest the specific combination of features described in claim 1. For this reason, claim 1 is believed to be patentable.

Claims 2 and 5 are dependent claims and are also believed to be patentable.

Regarding the rejection of the remaining claims under 35 U.S.C. § 103(a) as being unpatentable over Ma and further in view of Kekic, claims 3-4 and 6 are dependent claims and are also believed to be patentable. Ma in combination with Kekic still fails to suggest the claimed invention for the reasons given above with respect to Ma. Claim 7 is an independent claim and recites similar subject matter as claim 1, and as such, is believed to be patentable over for similar reasons. Claims 8-10 are dependent claims and are also believed to be patentable.

Applicants respectfully request that the Examiner reconsider and withdraw the rejections, and allow the claims.

Respectfully submitted,

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Attachment

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please replace claims 1, 7, and 9-10 as shown below.

1. (Amended) A computer readable storage medium having instructions stored thereon, the instructions being executable by a computer to provide, to a user, a user interface to a network management system for configuring a network connection between a provider access point and a user access point over a network including a permanent virtual circuit between a switch and the user access point, the medium further comprising:

instructions for providing a user interface to the user at the user access point that interfaces the user with the network management system and that directs the user to select a connection bandwidth for the permanent virtual circuit between the switch and the user access point;

instructions for receiving at the network management system, through the user interface, a message indicative of a selected bandwidth from the user; and

instructions for remotely provisioning the switch with the network management system in response to receiving the message to throttle the network connection at the switch such that the connection bandwidth between the switch and the user access point is limited by the user selected bandwidth thereby allowing the user, from the user access point, to interface with the network management system and select a bandwidth that is, in turn, provisioned as the connection bandwidth between the switch and the user access point.

7. (Amended) A method for providing, to a user, a user interface to a network management system for configuring a network connection between a provider access point and a user access point over a network including a permanent virtual circuit between a switch and the user access point, the method further comprising:

establishing a graphical user interface to the user at the user access point that interfaces the user with the network management system [at a location of the user];

directing the user, through the user interface, to select a connection bandwidth for the permanent virtual circuit between the switch and the user access point;

receiving at the network management system, through the user interface, a message indicative of a selected bandwidth from the user; and

remotely provisioning the switch with the network management system in response to receiving the message to throttle the network connection at the switch such that the connection bandwidth between the switch and the user access point is limited by the user selected bandwidth thereby allowing the user, from the user access point, to interface with the network management system and select a bandwidth that is, in turn, provisioned as the connection bandwidth between the switch and the user access point.

9. (Amended) The method of claim [1] 7 further comprising:
authenticating the user prior to remotely provisioning the switch.

10. (Amended) The method of claim [1] 7 wherein the network includes a plurality of subnets, each subnet having a corresponding element type and including at least

one programmable element of that type, each element type having a corresponding element manager, the method further comprising:

determining a route made up of links over the network from the provider point to the user point, wherein a network-to-network link connects a pair of adjacent subnets having elements of different types and a network logical link provides a path across a subnet; and

establishing a connection across each subnet on the route by sending a request to the corresponding element manager to program the at least one subnet element in accordance with the network logical link across that subnet, and for establishing a network-to-network connection between adjacent subnets on the route in accordance with the network-to-network link between those adjacent subnets to provide the network connection between the provider point and the user point.